

What is claimed is:

1                      *Sub 1* 1.      An oven assembly for the cooking of food products, the oven  
2 assembly comprising:

3                      a cooking chamber defined at least in part by a first pair of oppositely  
4 disposed first and second wall structures, each of the first and second wall structures  
5 including a plurality of spaced apart openings for the passage of air therethrough and

6                      a rotating valve in both heated air receiving communication and return  
7 air communication with a heat source, the rotating valve in heated air distributing  
8 communication with the first wall structure and in return air communication with the  
9 second wall structure of the first pair of oppositely disposed first and second wall  
10 structures at a selected point in time such that heated air is passed through the plurality  
11 of spaced apart openings in the first wall structure into the cooking chamber and return  
12 air from the cooking chamber is passed through the plurality of spaced apart openings  
13 in the oppositely disposed second wall structure and to the rotating valve for return to  
14 the heat source, the rotating valve being capable of rotation to be in heated air  
15 distributing communication with the second wall structure and in return air  
16 communication with the first wall structure.

1                      2.      The oven assembly of claim 1 additionally comprising the heat  
2 source, wherein the heat source comprises a burner assembly.

1 *sub 1* 3. The oven assembly of claim 1 wherein the cooking chamber  
2 comprises a baking chamber for the baking of selected food products.

1 4. The oven assembly of claim 1 wherein the cooking chamber is  
2 sized to stationarily contain at least one food-carrying rack within the cooking  
3 chamber, the rack including a plurality of support members for carrying the food  
4 products.

1 5. The oven assembly of claim 1 wherein the rotating valve rotates  
2 continuously.

1 6. The oven assembly of claim 1 wherein the rotating valve rotates  
2 at a rate of about one-half to five revolutions per minute.

1 7. The oven assembly of claim 1 wherein the rotating valve rotates  
2 in a back and forth fashion.

1 <sup>car 81</sup> 8. The oven assembly of claim 1 wherein the cooking chamber  
2 surrounds the food products being cooked and the rotating valve rotates such that the  
3 food products are cooked with even heat energy distribution while the food products  
4 remain stationary.

1 9. A commercial baking oven assembly for the baking of food  
2 products, the oven assembly comprising:

3 a baking chamber defined at least in part by a first pair of oppositely  
4 disposed first and second wall structures, each of the first and second wall structures  
5 including a plurality of spaced apart opening for the passage of air therethrough and

6 a rotating valve in both heated air receiving communication and return  
7 air communication with a burner assembly, the rotating valve in heated air distributing  
8 communication with the first wall structure and in return air communication with the  
9 second wall structure of the first pair of oppositely disposed wall structures at a  
10 selected point in time such that heated air is passed through the plurality of openings  
11 in the first wall structure into the baking chamber and return air from the baking  
12 chamber is passed through the plurality of openings in the oppositely disposed second  
13 wall structure and to the rotating valve for return to the burner assembly, the rotating  
14 valve being capable of rotation to be in heated air distributing communication with the  
15 second wall structure and in return air communication with the first wall structure of

16 *cut B1* the first pair of oppositely disposed wall structures at a subsequent selected point in  
17 time.

1 10. The oven assembly of claim 9 wherein the rotating valve rotates  
2 continuously.

1 11. The oven assembly of claim 9 wherein the rotating valve rotates  
2 at a rate of about one-half to five revolutions per minute.

3 12. The oven assembly of claim 9 wherein the cooking chamber  
4 surrounds the food products being cooked and the rotating valve rotates such that the  
5 food products are cooked with even heat energy distribution while the food products  
6 remain stationary.

1 *car 13* 13. A method of operating an oven for the cooking of food products  
2 with even heat energy distribution, the oven including a cooking chamber defined at  
3 least in part by a first pair of oppositely disposed first and second wall structures, each  
4 of the first and second wall structures including a plurality of spaced apart openings  
5 for the passage of air therethrough, the oven including a rotating valve in both heated  
6 air receiving communication and return air communication with a heat source, said  
7 method comprising:

8 passing heated air from the heat source through the rotating valve and  
9 through the spaced apart openings in the first wall structure into the cooking chamber,  
10 and return air from the cooking chamber through the spaced apart openings in the  
11 second wall structure and the rotating valve to the heat source and

12 rotating the rotating valve to pass heated air from the heat source  
13 through the rotating valve and through the spaced apart openings in the second wall  
14 structure into the cooking chamber, and return air from the cooking chamber through  
15 the spaced apart openings in the first wall structure.

1 14. The method of claim 13 wherein the rotating valve rotates  
2 continuously.

1 15. The method of claim 13 wherein the rotating valve rotates at a  
2 rate of about one-half to five revolutions per minute.

1                     16     The method of claim 13 wherein the rotating valve rotates in a  
2     back and forth fashion.

1                     17.    The method of claim 13 wherein the cooking chamber surrounds  
2     the food products being cooked and the rotating valve rotates such that the food  
3     products are cooked with even heat energy distribution while the food products remain  
4     stationary.

1                     18.    A method of operating a baking oven for the baking of food  
2     products with even heat energy distribution, the baking oven including a baking  
3     chamber defined at least in part by a first pair of oppositely disposed first and second  
4     wall structures, each of the first and second wall structures including a plurality of  
5     spaced apart openings for the passage of air therethrough, the baking oven also  
6     including a rotating valve in both heated air receiving communication and return air  
7     communication with a burner assembly, the rotating valve having a first state in which  
8     the rotating valve is in heated air distributing communication with the spaced apart  
9     openings of the first wall structure and in return air communication with the spaced  
10    apart openings of the second wall structure and a second state in which the rotating  
11    valve is in heated air distributing communication with the spaced apart openings of

12 *ca 131* the second wall structure and in return air communication with the spaced apart  
13 openings of the first wall structure, said method comprising:

14 rotating the rotating valve to sequentially alternate the rotating valve  
15 between the first and second states.

1 19. The method of claim 18 wherein the rotating valve rotates  
2 continuously.

1 20. The method of claim 18 wherein the rotating valve rotates at a  
2 rate of about one-half to five revolutions per minute.

1 21. The method of claim 18 wherein the rotating valve rotates back  
2 and forth.

1 22. The method of claim 18 wherein the cooking chamber surrounds  
2 the food products being cooked and the rotating valve rotates such that the food  
3 products are cooked with even heat energy distribution while the food products remain  
4 stationary.